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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/871,176	SMITH ET AL.
	Examiner	**Art Unit**	
	OLEG SURVILLO	2142	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 July 2008</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-15,17-31,33 and 34</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-15,17-31,33 and 34</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>28 September 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>04/07/08</u>.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission dated July 21,

2008 has been entered.

Response to Amendment

2.   Claims 1-15, 17-31, 33, and 34 remain pending in the application. Claims 1 and

21 are currently amended. Claims 16, 32, and 35-49 remain canceled. No new claims

are added.

Response to Arguments

3.   With regard to the Applicants' remarks dated July 21, 2008:

        regarding drawings objection, Applicant's amendment has been fully considered

and is sufficient. Therefore, the objection has been withdrawn.

        Regarding the rejection of claim 1 under 35 U.S.C. 103(a) as being unpatentable

over Lewis in view of Cohen and in further view of Arnold, Applicants argued that:

"neither Arnold nor any of the cited references have been shown to teach or suggest

"deriving a client event from the state event" and subsequently "transmitting a client

event *derived from* the state event"...to a client". Further, Applicants argued that: *"Arnold has been shown to teach using queues to pass data back and forth between clients and servers. Merely passing data via these queues, however, fails to teach or suggest deriving a second event from a first event that has been placed in a queue, and transmitting the second event to a client".* This argument is not persuasive because claim 1 lacks the specificity as to what constitutes "deriving a second event from a first event", as pointed out by the Examiner in the last Office action. Thus, absent such specificity, the limitation of "deriving a client event from the state event" is interpreted broadly but reasonably as "obtaining the event from the queue", wherein "a client event" and "the state event" are also interpreted broadly but reasonably as referring to the same event in light of the specification at page 32. Therefore, the rejection is maintained since the combination of Lewis, Cohen, and Arnold meets broad limitations as presently claimed.

Applicants are therefore suggested to amend claims 1 and 21 by specifying the details of what is being meant by "deriving a client event from the state event" and how it is being performed, such that one of ordinary skill would understand what is embodied by the step of deriving.

As to any arguments not specifically addressed, they are the same as discussed above.

Claim Objections

4.   Claims 17 and 33 are objected to because of the following informalities: these

claims appear to depend from canceled claims 16 and 32.

Appropriate correction is required in the next response to correctly identify claim

17 as dependent from claim 1 and claim 33 as dependent from claim 21.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 1-15, 17-31, 33, and 34 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

As to claims 1 and 21, the limitation of "transmitting the current state of the

specific data object to a set of clients selected from the plurality of clients" (emphasis

added) is claimed to comprise the steps of: "placing a state event in the client event

queue associated with the respective client, the state event indicating the current state

of the particular data object; deriving a client event from the state event prior to

transmission of the client event to the respective client; and subsequently transmitting

the client event derived from at least the state event in the client event queue to the

respective client" (emphasis added). It is unclear how the steps of: "placing a state

event in the client queue", "deriving a client event from the state event" and "transmitting

the client event to the respective client" result in "transmitting the current state of the

specific data object to a set of clients" (emphasis added). In particular, "transmitting the

client event" does not necessarily result in "transmitting the current state" for the

following reasons.

The specification discloses, for example at page 25 lines 1-8, that the object

event [state event] can contain the entire object itself [the current state], a pointer to the

object [the current state], a representation of what aspects of the object have changed

[differential of the prior state], or a pointer to this information. Thus, the limitation of

"placing a state event in the client event queue associated with the respective client, the

state event indicating the current state of the particular data object" (emphasis added) is

interpreted in light of the specification as including embodiments of the state event

being a pointer to the current state, thus not containing actual current state of the

specific data object. Furthermore, the specification discloses, at page 32, that a

"derived" client event can be the same as the source state event if appropriate for the

particular implementation. Thus, in at least one embodiment, the derived client event is

identical to the state event. The derived client event being the same as the state event,

"transmitting the client event to the respective client" effectively results in transmitting

the state event, which could be a pointer to the current state stored elsewhere. But,

"transmitting a pointer to the current state" is not equivalent to "transmitting the current

state of the specific data object" as per claims 1 and 21.

Therefore, Applicants are suggested to amend claims 1 and 21 to specify that the

state event contains the current state of the particular data object (instead of indicating

the current state of the particular data object), thus excluding embodiments of the state

event being a pointer to the current event stored elsewhere.

As to claims 1 and 21, it is also unclear as to what constitutes "deriving a client

event from the state event". As discussed above, the specification discloses at page 32

that a "derived" client event can be the same as the source state event. Thus, if the

"derived" client event is the same as the state event in some embodiments, the step of

deriving amounts to doing nothing, which makes the claim ambiguous.

Applicants were advised in the last Office action to explicitly introduce the

concept of "deriving" as a separate step in the claim body *with sufficient details*

supported by the specification as to enable one of ordinary skill in the art realize the

inventive concept of "deriving a client (second) event from the state (first) event" and its

structural/functional interrelationship with other steps in the claim (emphasis added).

See last OA at page 4. In response to the last OA, Applicants introduced "deriving" as a

separate step, but failed to specify the details of what is being meant by "deriving a

client event from the state event" and how it is being performed, such that one of

ordinary skill would understand what is embodied by the step of deriving.

Thus, the term "deriving a client event from the state event" is interpreted broadly

but reasonably as "obtaining the event from the queue", wherein "a client event" and

"the state event" are also interpreted broadly but reasonably as referring to the same

event in light of the specification at page 32.

Dependent claims 2-15, 17-20, 22-31, 33, and 34 are rejected for the same

reasons as being dependent from and incorporating all the limitations of corresponding

independent claims.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1, 6, 8-10, 14, 19-21, 25, 26, 28-31, and 34 are rejected under 35 U.S.C.

103(a) as being unpatentable over Lewis (US Patent 6,513,019 B2) in view of Cohen et

al. (US 2004/0254921 A1) and in further view of Arnold et al. (US 2007/0078978 A1).

As to claims 1 and 21, Lewis shows a method and a system for processing

information provided from at least one content provider [disparate systems and data

sources] (col. 4, lines 55-57) about a state of a plurality of objects (col. 4, lines 57-59),

the states being subject to periodic updates (col. 3, lines 22-25) [wherein a state of an

object is interpreted as a time sensitive information related to an object], and for

delivering formatted information indicating a current state of at least a portion of the

plurality of objects (col. 4, lines 59-63) to a plurality of clients via a data communication

network (col. 4, lines 63-65) in substantially real-time (col. 4, lines 50-53). Lewis shows:

receiving raw data objects on at least one raw data stream input (col. 4, lines 55-

56; col. 8, lines 54, 58-59; col. 9, lines 39-41);

generating a formatted data object from a received raw data object (col. 4, lines 59-60; col. 8, lines 60-61; col. 9, lines 45-50);

storing a current state of the formatted data object in an object storage pool [a database] (col. 6, lines 39-41; col. 8, lines 61-65; col. 10, lines 10-14); and

broadcasting the current state of the formatted data object on a particular broadcast data stream (col. 4, lines 63-67; col. 6, lines 41-43; col. 8, lines 65-67; col. 9, lines 1-7; col. 9, lines 54-60).

Lewis also shows:

establishing communication sessions with a plurality of clients (col. 4, lines 63-65);

connecting to at least one broadcast data stream (col. 9, lines 60-67);

receiving on a connected broadcast data stream a current state for a specific data object [messages] (col. 9, lines 60-67; col. 10, lines 55-62); and

transmitting the current state of the specific data object to a set of clients from the plurality of clients (col. 8, lines 65-67; col. 9, lines 1-7).

Lewis does not show updating an object pool cache to reflect the current state of the specific data object. Lewis also does not show that wherein each connected client has a respective client event queue, the step of transmitting the current state of the specific data object to the set of clients comprises the steps of, for each respective client in the set of clients:

placing a state event in the client event queue associated with the respective client, the state event indicating the current state of the particular data object;

deriving a client event from the state event prior to transmission of the client event to the respective client; and

subsequently transmitting the client event derived from at least the state event in the client event queue to the respective client.

Cohen shows:

updating an object pool cache to reflect the current state of the specific data object [updating proxy cache so that the cache has a valid (current) copy of the resource requested by a client] (par. [0002], lines 28-45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis by having an object pool cache that is getting updated to reflect the current state of the specific data object in order to reduce the load on the object storage pool serving data and information distribution requests by transmitting the current state of the specific data object to clients from an object pool cache that stores a copy of the current state of the requested data object.

Lewis in view of Cohen does not show that wherein each connected client has a respective client event queue, the step of transmitting the current state of the specific data object to the set of clients comprises the steps of, for each respective client in the set of clients:

placing a state event in the client event queue associated with the respective client, the state event indicating the current state of the particular data object;

deriving a client event from the state event prior to transmission of the client

event to the respective client; and

subsequently transmitting the client event derived from at least the state event in

the client event queue to the respective client.

Arnold shows:

a delivery manager [a client/server system (2400)] wherein each connected client

has a respective client event queue [message queue (2430)] (par. [0157]);

placing [data] in the client event queue associated with the respective client

[sending data to clients (2410) using queue] (par. [0157]);

deriving [data] prior to transmission of the [data] to the respective client [obtaining

(removing) data from the queue prior to transmission to the respective client] (par.

[0139]-[0140]); and

subsequently transmitting [data obtained from the queue] to the respective client

(par. [0157]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method and system of Lewis in view of Cohen by having each

connected client having a respective client event queue, as taught by Arnold, placing a

state event in the client event queue associated with the respective client, the state

event indicating the current state of the particular data object, deriving a client event

from the state event prior to transmission of the client event to the respective client, and

subsequently transmitting the client event derived from at least the state event to the

respective client in order to effectively deliver message data to a particular client in case when the client is not able to receive messages at the sending speed of the server.

As to claims 6 and 25, Lewis shows an offer processor comprising interface/transformation server (100) Fig. 4 configured to perform the step of determining an object type of the raw data object (col. 10, lines 34-42), and the step of applying a set of formatting rules to the received raw data object in accordance with the object type to generate the formatted data object (col. 10, lines 43-49; col. 6, lines 7-12).

As to claims 8 and 28, Lewis shows the step of determining an object type of the raw data object (col. 10, lines 34-42) and that the particular broadcast data stream is selected from a plurality of broadcast data streams according to the object type comprising listening for any messages of a type that is processed by one or more of the information servers (col. 10, lines 55-62).

As to claims 9 and 29, Lewis shows validating the contents of the raw data object (col. 10, lines 8-9; col. 17, lines 23-33) and upon a failed validation, preventing subsequent broadcast of the current state of the formatted data object data derived from the raw data object (col. 10, lines 62-67).

As to claims 10 and 30, Lewis shows that the raw data object comprises information related to a financial product offering (col. 4, lines 54-59).

As to claims 14 and 31, Lewis shows the step of, in response to a detection that a particular client has subscribed to a new broadcast data stream not in a set of connected broadcast data streams, connecting to the new broadcast data stream comprising allowing subscribers to designate the specific information that is to be derived from each type of incoming transaction (col. 6, lines 7-11) and selecting from the Message Bus only those messages that are of interest to the listening component (col. 10, lines 65-67) and wherein users can introduce new services by modifying rule sets (col. 15, lines 7-28).

As to claim 26, Lewis shows a processing database having object typing and formatting rules stored therein comprising a table of stored transaction types (col. 10, line 38; col. 9, lines 25-32).

As to claims 19 and 34, Lewis in view of Cohen shows all the elements except for monitoring the performance of communication with each connected client, and dynamically adjusting a rate at which the current state of the specific data object is transmitted to each respective client in response to the monitored performance.

Arnold shows monitoring the performance of communication with each connected client comprising measuring the roundtrip time for packet transmission (paragraph [0173], lines 7-10), and dynamically adjusting a rate at which the current

state of the specific data object is transmitted to each respective client in response to

the monitored performance (paragraph [0173], lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method and system of Lewis in view of Cohen by monitoring the

performance of communication with each connected client, and dynamically adjusting a

rate at which the current state of the specific data object is transmitted to each

respective client in response to the monitored performance in order to substantially

optimize communications between a client and a server (paragraph [0173], lines 6-7 in

Arnold).

As to claim 20, Arnold shows that the step of monitoring the performance of

communication with each connected client comprises determining network transmission

time and a client processing time for received transmissions (paragraph [0173]).

8.   Claims 2, 3, 5, 22, and 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lewis in view of Cohen et al. in view of Arnold et al. and in further

view of Williams, Jr. (US Patent: 4,868,866).

As to claims 2 and 22, Lewis shows determining if a prior version of the formatted

data object was present in the object storage pool comprising having business rules that

define management of previously existing data (col. 10, lines 18-20). Lewis also shows

determining a data differential between the prior version and the current state of the

formatted data object comprising calculating the difference between the previous values

and the new values (col. 14, lines 27-31).

Lewis in view of Cohen and in further view of Arnold does not explicitly show

broadcasting the data differential on the particular broadcast data stream.

Williams shows determining a data differential between the prior version and the

current state of the formatted data object and broadcasting the data differential on the

particular broadcast data stream (abstract, lines 9-13).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method and system of Lewis in view of Cohen and in further

view of Arnold by broadcasting the determined data differential on the particular

broadcast data stream in order to reduce a load on the broadcast data distribution

system in heavier than usual data volume situations (abstract, lines 9-10 in Williams).

As to claims 3 and 23, Lewis shows that each client has an associated user

interface that dynamically configures itself to display data indicating data stream

subscriptions comprising subset of the data and information that the user is subscribed

for (col. 20, lines 5-21). Lewis also shows having at least one object rule comprising a

business rule associated with the subscribed data stream (col. 6, lines 7-12; col. 15,

lines 20-23). Lewis shows that the step of transmitting the current state of the specific

data object to a set of clients comprises the steps of for each respective client

subscribed to the particular input data stream, evaluating the object rules associated

with the particular input data stream against the specific data object and transmitting the

current state of the specific data object to the respective client in response to a positive
evaluation comprising displaying to subscribing client only that subset of the data and
information that the user is entitled to retrieve (col. 20, lines 5-21; col. 6, lines 7-28).

      Lewis in view of Cohen and in further view of Arnold does not show that data
indicating data stream subscriptions and at least one object rule associated with the
subscribed data streams are contained in a profile associated with each client.

      Williams shows that data indicating data stream subscriptions and at least one
object rule comprising an entitlement message associated with the subscribed data
streams are contained in a profile associated with each client (col. 10, lines 60-65).

      It would have been obvious to one of ordinary skill in the art at the time of the
invention to modify the method and system of Lewis in view of Cohen and in further
view of Arnold by having data indicating data stream subscriptions and at least one
object rule comprising an entitlement message associated with the subscribed data
streams are contained in a profile associated with each client in order to allow changes
to the information content in a profile performed without disturbing the underlying
information server code (col. 9, lines 28-31 in Lewis).

      As to claim 5, Lewis in view of Cohen and in further view of Arnold shows all the
elements except for the step of broadcasting the current state comprising broadcasting
a corresponding sequence number associated with the current state.

Williams shows broadcasting a corresponding sequence number associated with

the current state comprising associating a sequence number with each broadcasted

real-time message (col. 6, lines 5-8).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Lewis in view of Cohen and in further view of Arnold

by broadcasting a corresponding sequence number associated with the current state in

order to identify and correct errors that might occur during the transmission more easily

(col. 6, lines 5-8 in Williams).

9.   Claims 4 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lewis in view of Cohen et al. in view of Arnold et al. and in further view of Wynblatt et al.

(US Patent: 6,645,421 B1).

As to claims 4 and 24, Lewis shows having a plurality of Message Buses that can

be deployed simultaneously.

Lewis in view of Cohen and in further view of Arnold does not show that the step

of connecting to at least one broadcast data stream comprises the steps of connecting

to a first data stream from a first information manager and connecting to a second

broadcast data stream from a second information manager.

Wynblatt shows connecting to a first data stream from a first information manager

comprising a first data stream server (11) and connecting to a second broadcast data

stream comprising a second data stream server (11) from a second information

manager (col. 1, lines 32-34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a method and system of Lewis in view of Cohen and in further view of Arnold by having a plurality of information managers and connecting to a first data stream from a first information manager and connecting to a second broadcast data stream from a second information manager in order to perform a load balancing by having plural information managers receiving incoming data messages from a plurality of source systems and broadcasting data streams (col. 8, lines 54-55 in Lewis).

10.   Claims 7 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Cohen et al. in view of Arnold et al. and in further view of Nguyen et al. (US Patent: 6,072,870).

As to claims 7 and 27, Lewis shows adding unique values that are used to create "primary-foreign key" relationships that interrelate pairs of data tables (col. 2, lines 28-33; col.12, lines 8-16).

Lewis in view of Cohen and in further view of Arnold does not explicitly show a translator performing the step of translating the raw data object into a raw event comprising at least one name-value pair prior to performing the steps of determining an object type of the raw data object and generating a formatted data object.

Nguyen shows an HTTPS server translating the raw data object into a raw event comprising at least one name-value pair comprising decrypting received message and parsing the message into name-value pairs (col. 62, lines 10-20) prior to performing the steps of determining an object type of the raw data object and generating a formatted

data object comprising parsing the message based on determined message type and

extended SET version information (col. 62, lines 20-29).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method and system of Lewis in view of Cohen and in further

view of Arnold by having the step of translating the raw data object into a raw event

comprising at least one name-value pair prior to performing the steps of determining an

object type of the raw data object and generating a formatted data object and having the

offer processor receiving the raw event as input in order to facilitate navigation from

table-to-table and maintain referential integrity among interrelated tables (col. 12, lines

12-14 in Lewis).

11.   Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lewis in view of Cohen et al. in view of Arnold and in further view of Polcyn et al. (US

Patent: 5,878,418).

As to claim 11, Lewis in view of Cohen shows connecting to a particular

broadcast data stream (col. 9, lines 60-67 in Lewis).

Lewis in view of Cohen and in further view of Arnold does not show initializing the

object pool cache with an initial state of data object carried on the particular broadcast

data stream.

Polcyn shows initializing the object pool cache comprising a database with an

initial state of data objects comprising initial states for the defined data elements (col. 9,

lines 44-53).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Lewis in view of Cohen and in further view of Arnold

by initializing the object pool cache with an initial state of data object carried on the

particular broadcast data stream in order to create database structure, including data

fields, and fill the object pool cache with some initial information (col. 9, lines 49-53 in

Polcyn).

As to claim 12, Lewis shows the process of initially populating the database with

data objects comprising market data (col. 16, lines 28-30).

Lewis in view of Cohen and in further view of Arnold does not explicitly show the

step of obtaining an initial state of data objects from the information manager generating

the particular broadcast data stream.

Polcyn shows obtaining an initial state of data objects from the information

manager generating the particular broadcast data stream comprising data initialization

(240) setting some initial state to the defined data elements in the newly created

database structure corresponding to a new application loaded wherein the initial state of

data objects are obtained by the newly created database from the data initialization

(240) (col. 9, lines 44-54).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Lewis in view of Cohen and in further view of Arnold

by having the step of obtaining an initial state of data objects from the information

manager generating the particular broadcast data stream in order to initialize the newly

created database structure associated with a new broadcast data stream with the initial

information (col. 9, lines 49-53 in Polcyn).

12.   Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lewis in view of Cohen et al. in view of Arnold in view of Polcyn et al. and in further

view of Balaraman et al. (US Patent: 6,847,971 B1).

       As to claim 13, Lewis in view of Cohen, Arnold, and in view of Polcyn shows all

the elements except for after establishing a communication session with a particular

client, delivering to the particular client a snapshot of a set of data objects in the object

pool cache which are carried on broadcast data streams to which the particular client is

subscribed.

       Balaraman shows that after establishing a communication session with a

particular client (col. 9, lines 10-15), delivering to the particular client a snapshot of a set

of data objects in the object pool cache comprising a database server (202) Fig. 2 which

are carried on broadcast data streams to which the particular client is subscribed (col. 6,

lines 37-41; col. 9, lines 50-56; Fig. 4)

       It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Lewis in view of Cohen, Arnold, and in view of Polcyn

by delivering to the particular client a snapshot of a set of data objects in the object pool

cache which are carried on broadcast data streams to which the particular client is

subscribed in order to provide a subscribing client with a data that reflects the state of a

set of data objects in the object pool cache at a particular point in time (col. 1, lines 57-

60 in Balaraman).

As to claim 15, Lewis in view of Cohen and Arnold shows all the elements except

for initializing the object pool cache with an initial state of data object carried on the new

broadcast data stream, and delivering to the particular client a snapshot of a set of the

data objects in the object pool cache associated with the new data stream.

Polcyn shows initializing the object pool cache comprising a database with an

initial state of data objects comprising initial states for the defined data elements (col. 9,

lines 44-53).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Lewis in view of Cohen and Arnold by initializing the

object pool cache with an initial state of data object carried on the new broadcast data

stream in order to create database structure, including data fields, and fill the object

pool cache with some initial information (col. 9, lines 49-53 in Polcyn).

Balaraman shows delivering to the particular client a snapshot of a set of the

data objects in the object pool cache comprising a database server (202) Fig. 2

associated with the new data stream (col. 6, lines 37-41; col. 9, lines 50-56; Fig. 4).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Lewis in view of Cohen, Arnold, and in view of Polcyn

by delivering to the particular client a snapshot of a set of data objects in the object pool

cache associated with the new data stream in order to provide a subscribing client with

a data that reflects the state of a set of data objects in the object pool cache at a

particular point in time (col. 1, lines 57-60 in Balaraman).

13.   Claims 17, 18, and 33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lewis in view of Cohen et al. in view of Arnold et al. and in further

view of Liu et al. (US Patent: 6,839,680 B1).

        As to claims 17 and 33, Lewis in view of Cohen in further view of Arnold shows

all the elements except for identifying pending state events associated with a respective

client which are related to a common data object, and aggregating the identified state

events to thereby reduce the number of pending state events.

        Liu shows identifying pending state events associated with a respective client

which are related to a common data object comprising keeping track of which events

have not been retrieved (col. 28 lines 56-59) wherein an event record has a user

identifier (902 Fig. 9) (col. 24, lines 7-27), and aggregating the identified state events to

thereby reduce the number of pending state events (col. 33, lines 4-22, Fig. 2).

        It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method and system of Lewis in view of Cohen and in further

view of Arnold by identifying pending state events in the client event queue (2430 in

Arnold) associated with a respective client which are related to a common data object,

and aggregating the identified state events to thereby reduce the number of pending

state events in order to allow all of the relevant information about the user's relevant information during the specified period of time to be easily accessed from a single data source (col. 33, lines 32-35 in Liu).

As to claim 18, Liu shows the identified state events are aggregated into a single state event (col. 33, lines 19-22, Fig. 2 level 0).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLEG SURVILLO whose telephone number is (571)272-9691. The examiner can normally be reached on M-Th 8:30am - 6:00pm; F 8:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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